

# Notice of Allowability

Application No.

09/925,199

Examiner

Dah-Wei D. Yuan

Applicant(s)

MALEKI ET AL.

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1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/5/04.
2. ☒ The allowed claim(s) is/are 2,4 and 5.
3. ☒ The drawings filed on 09 August 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

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**SYSTEM FOR ENHANCED LITHIUM-ION BATTERY PERFORMANCE  
AT LOW TEMPERAURES**

Examiner: Yuan

S.N. 09/925,199

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March 16, 2004

**Detailed Action**

1. The Applicant's amendment filed on March 5, 2004 was received. Claims 1,3,6-8 were cancelled. Claims 2,4,5 were amended.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on January 13, 2004.

***Claim Rejections***

3. The claim rejections under 35 U.S.C. 102(e) as anticipated by Hallaj et al. on claims 1,3-6 are withdrawn because the independent claim 1 has been canceled and the independent claim 5 has been amended. The claim rejections under 35 U.S.C. 103(a) as obvious over Hallaj et al. on claims 7,8 are withdrawn because both claims have been canceled. The claim rejections under 35 U.S.C. 103(a) as obvious over Salyer et al. on claims 7,8 are withdrawn because both claims have been canceled.

***Reasons for Allowance***

4. Claims 2,4,5 are allowed. The invention of independent claim 2 recites a battery comprising at least one electrochemical cell and a sleeve disposed around the at least one electrochemical cell, wherein the sleeve comprising an aluminum filled thermally conductive phase change material that acts as an insulator at relatively low temperatures

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and conductor at relatively high temperature. The instant specification teaches the aluminum filled thermally conductive phase change material (Coolphase™ MPC-120) works well for single transitions from a cold environment to a warm environment. The closest prior arts of record, Hallaj et al. and Salyer et al., do not teach the use of said phase change material as a sleeve in a battery. The invention of independent claim 5 recites a battery comprising a plurality of lithium-ion cells and a sleeve disposed around the cells, wherein the sleeve comprising an aluminum filled thermally conductive phase change material that acts as an insulator at relatively low temperatures and conductor at relatively high temperature. The instant specification teaches the aluminum filled thermally conductive phase change material (Coolphase™ MPC-120) works well for single transitions from a cold environment to a warm environment. The closest prior arts of record, Hallaj et al. and Salyer et al., do not teach the use of said phase change material as a sleeve in a battery.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (571) 272-1295. The examiner can normally be reached on Monday-Friday (8:00-5:00).

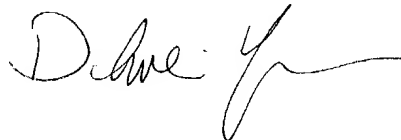
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dah-Wei D. Yuan  
March 16, 2004

A handwritten signature in black ink, appearing to read "Dah-Wei D. Yuan", with a long horizontal flourish extending to the right.